

AMENDMENTS TO THE SPECIFICATION:

Before the title, insert the following heading:

--TITLE OF THE INVENTION--.

Before the paragraph beginning at page 1, line 4,
insert the following heading:

--FIELD OF THE INVENTION--.

Before the paragraph beginning at page 1, line 8,
insert the following heading:

--BACKGROUND--.

Before the paragraph beginning at page 3, line 14,
insert the following heading:

--SUMMARY OF THE INVENTION--.

Replace the paragraphs beginning at page 4, line 1, and
ending at page 4, line 35 with the following new paragraphs:

~~--In the method of the invention for controlling a pump
station, the pump included in the pump station transferring
liquid from a tank or into a tank and said pump being controlled
by an electric drive comprising a frequency converter~~

~~the surface level of the liquid in the tank is measured with a
sensor,~~

~~the pump operation is controlled on the basis of the measured
surface level,~~

~~the method being characterised by~~

~~—selecting a first value of the liquid surface level,
—selecting as the value of the first rotation speed of the pump
substantially the value at which the ratio of transferred liquid
amount to consumed energy is at maximum and
—monitoring the moment when the surface level reaches said first
value of the liquid surface level from a predetermined direction,
and controlling as a consequence of this detection the pump
rotation speed to said first value of the rotation speed,
—said monitoring of the surface level and control of the
rotation speed being performed in the frequency converter.~~

~~The frequency converter of the invention for electric drive of a
pump station, the pump station comprising a liquid tank, a pump
and an electric drive actuating the pump, is characterised by the
frequency converter comprising~~

~~—means for storing a first value of the liquid surface level,
—means for storing a first value of the rotation speed of the
pump,
—means for measuring the liquid surface level on the basis of a
signal received from a sensor,
—means for detecting the moment when the liquid surface level
reaches said first value of the liquid surface level from a~~

~~predetermined direction, and means for controlling the rotation speed of the pump to said first value of the rotation speed as a consequence of said detection so that said first value of the rotation speed is substantially the value at which the transferred liquid amount relative to the consumed energy is at maximum.~~

In accordance with the present invention there is provided a method for controlling a pump station that comprises at least two pumps, each of the at least two pumps being arranged to transfer liquid from or into a tank and being controlled by an electric drive comprising a frequency converter. The method according to the invention comprises:

- measuring a liquid surface level in the tank by means of a sensor,
- controlled activation of each of the at least two pumps on the basis of the measured liquid surface level,
- selecting a first value of the liquid surface level,
- selecting as a first value of pump rotation speed substantially a value at which amount of transferred liquid relative to consumed energy is at maximum,
- detecting a moment when the liquid surface level reaches said first value of the liquid surface level from a predetermined direction, and

- controlling, as a consequence of this detection, the pump rotation speed one of said at least two pumps to said first value of the pump rotation speed, monitoring of the liquid surface level and the controlling of the pump rotation speed being performed in the frequency converter,

wherein said at least two pumps are controlled at the pump station in such a way that said at least two pumps are alternately in such operating turns in which the pump rotation speed is said first value of the pump rotation speed.

In accordance with the present invention there is provided also a frequency converter for a pump station comprising a liquid tank, at least two pumps and electric drives for actuating the at least two pumps. The frequency converter according to the invention comprises:

- means for storing a first value of liquid surface level,
- means storing a first value of pump rotation speed, the first value of the pump rotation speed being substantially a value at which amount of transferred liquid relative to consumed energy is at maximum,
- means for measuring the liquid surface level on the basis of a signal received from a sensor,

- means for detecting a moment the liquid surface level reaches said first value of the liquid surface level from a predetermined direction, r
- means for controlling the pump rotation speed of one of the at least two pumps to said first value of the pump rotation speed as a consequence of said detection, and
- means for controlling the at least two pumps in such a way that said at least two pumps are alternately in such operating turns in which the pump rotation speed is said first value of the pump rotation speed, wherein the means for controlling comprises means for transmitting control data to one or more other frequency converters of the pump station for controlling the operating turns of the at least two pumps.--

Before the paragraph beginning at page 5, line 1,
insert the following heading:

--BRIEF DESCRIPTION OF THE FIGURES--.

Before the paragraph beginning at page 5, line 25,
insert the following heading:

--DESCRIPTION OF THE PREFERRED EMBODIMENT--.